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Appl. No. 09/673,707
Amdt. dated January 24, 2007
Reply to Notice of Non-Compliant Amendment

Listing of Claims:

1. (Currently amended) An immunotoxin comprising a cytotoxin attached to an anti-gp120 antibody having the binding specificity to the CD4 binding site of gp120 of 3B3 Fv (SEQ ID NO:1 which 3B3 Fv consists of a VH chain and a VL chain as encoded by SEQ ID NO:2) and a minimum binding affinity to gp-120 of 3B3 Fv (SEQ ID NO:1 which 3B3 Fv consists of a VH chain and a VL chain as encoded by SEQ ID NO:2), wherein said immunotoxin specifically binds to and kills mammalian cells infected with HIV-1.
2. (Currently amended) The immunotoxin of claim 1, wherein said cytotoxin is selected from the group consisting of ricin, abrin, a modified diphtheria toxin, and a modified *Pseudomonas* exotoxin A.
3. (Currently amended) The immunotoxin of claim 2, wherein said cytotoxin is a modified *Pseudomonas* exotoxin A.
4. (Currently amended) The immunotoxin of claim 3, wherein said modified *Pseudomonas* exotoxin A is selected from the group consisting of PE38, PE40, PE38KDEL (KDEL = SEQ ID NO:9), and PE38REDL (RDEL = SEQ ID NO:10).
5. (Currently amended) The immunotoxin of claim 4, wherein said modified *Pseudomonas* exotoxin A is PE38.
6. (Original) The immunotoxin of claim 1, wherein said antibody is selected from the group consisting of a single-chain Fv (scFv), a single-chain Fab (scFab), and a disulfide stabilized Fv (dsFv).
7. (Original) The immunotoxin of claim 6, wherein said antibody is a recombinantly expressed single-chain Fv.
8. Canceled

Appl. No. 09/673,707
Amdt. dated January 24, 2007
Reply to Notice of Non-Compliant Amendment

9. (Original) The immunotoxin of claim 1, wherein said immunotoxin is a fusion protein.

10. Canceled

11. (Original) The immunotoxin of claim 1, wherein said immunotoxin is suspended or dissolved in a pharmaceutically acceptable carrier or excipient.

12-18. Canceled.

19. (Withdrawn-currently amended) A single chain Fv antibody having the binding specificity of 3B3 Fv (~~SEQ ID NO:1~~ which 3B3 Fv consists of a VH chain and a VL chain as encoded by SEQ ID NO.:2).

20. (Withdrawn-currently amended) The antibody of claim 19, wherein said antibody has the amino acid sequence of 3B3 Fv (~~SEQ ID NO:1~~ which 3B3 Fv consists of a VH chain and a VL chain as encoded by SEQ ID NO.:2) or conservative substitutions thereof.

21. (Withdrawn- currently amended) The antibody of claim 20, wherein said antibody is 3B3(Fv) Fv (~~SEQ ID NO:1~~ which 3B3 Fv consists of a VH chain and a VL chain as encoded by SEQ ID NO.:2).

22. (Withdrawn- currently amended) A nucleic acid that encodes a single chain Fv antibody having the binding specificity of 3B3 Fv (~~SEQ ID NO:1~~ which 3B3 Fv consists of a VH chain and a VL chain as encoded by SEQ ID NO.:2).

23. (Withdrawn- currently amended) The nucleic acid of claim 22, wherein said antibody has the amino acid sequence of 3B3 Fv (~~SEQ ID NO:1~~ which 3B3 Fv consists of a VH chain and a VL chain as encoded by SEQ ID NO.:2) or conservative substitutions thereof.

24. (Withdrawn- currently amended) The nucleic acid of claim 20, wherein said nucleic acid encodes the 3B3 antibody (~~SEQ ID NO:1~~ which 3B3 Fv consists of a VH chain and a VL chain as encoded by SEQ ID NO.:2).

Appl. No. 09/673,707
Amdt. dated January 24, 2007
Reply to Notice of Non-Compliant Amendment

25-51. Canceled.

52. (Currently amended) A kit for killing cells that display a gp120 protein, said kit comprising a container containing an immunotoxin comprising a cytotoxin attached to an anti-gp120 antibody having the binding specificity to the CD4 binding site of gp120 of 3B3 Fv (SEQ ID NO:1) and a minimum binding affinity to gp-120 of 3B3 Fv (SEQ ID NO:1 which 3B3 Fv consists of a VH chain and a VL chain as encoded by SEQ ID NO:2), wherein said immunotoxin specifically binds to and kills mammalian cells infected with HIV-1.

53. (Currently amended) The kit of claim 52, wherein said cytotoxin is selected from the group consisting of ricin, abrin, a modified diphtheria toxin, and a modified *Pseudomonas* exotoxin A.

54. (Currently amended) The kit of claim 53, wherein said cytotoxin is a modified *Pseudomonas* exotoxin A.

55. (Currently amended) The kit of claim 53, wherein said immunotoxin is 3B3(~~Fv~~) Fv SEQ ID NO:1) (which 3B3 Fv consists of a VH chain and a VL chain as encoded by SEQ ID NO:2) attached to a modified *Pseudomonas* exotoxin A.

56. Canceled.

57. (Previously presented) An immunotoxin of claim 1, wherein said immunotoxin is a disulfide-stabilized ("ds") FV.

58. Canceled

59. (Withdrawn- currently amended) A nucleic acid that encodes a single chain fusion protein, said nucleic acid comprising:

(a) a nucleic acid sequence that encodes a single-chain antibody having the binding specificity of 3B3 Fv (SEQ ID NO:1 which 3B3 Fv consists of a VH chain and a VL

Appl. No. 09/673,707
Amdt. dated January 24, 2007
Reply to Notice of Non-Compliant Amendment

chain as encoded by SEQ ID NO.:2); and

(b) a nucleic acid sequence that encodes a cytotoxin.

60. (Withdrawn- currently amended) A nucleic acid of claim 59, wherein said cytotoxin is selected from the group consisting of ricin, abrin, a modified diphtheria toxin, and a modified *Pseudomonas* exotoxin A.

61. (Withdrawn- currently amended) A nucleic acid of claim 59, wherein said modified *Pseudomonas* exotoxin A is selected from the group consisting of PE38, PE40, PE38KDEL (KDEL = SEQ ID NO:9), and PE38REDL (RDEL = SEQ ID NO:10).

62. (Withdrawn- currently amended) A nucleic acid of claim 61, wherein said modified *Pseudomonas* exotoxin A is PE38.

63. (Withdrawn) A nucleic acid of claim 59, wherein said antibody is selected from the group consisting of a single-chain Fv (scFv), a single-chain Fab (scFab), and a disulfide stabilized Fv (dsFv).

64. (Withdrawn) A nucleic acid of claim 63, wherein said antibody is a recombinantly expressed single chain Fv.

65. (Withdrawn) A nucleic acid of claim 63, wherein said antibody is a dsFv.

66-67. Canceled

68. (Currently amended) A composition, said composition comprising:
a pharmaceutically acceptable carrier or excipient; and

an immunotoxin comprising a cytotoxin attached to an anti-gp120 antibody having the binding specificity of 3B3 Fv (~~SEQ ID NO:1~~ which 3B3 Fv consists of a VH chain and a VL chain as encoded by SEQ ID NO.:2).

Appl. No. 09/673,707
Amdt. dated January 24, 2007
Reply to Notice of Non-Compliant Amendment

69. (Currently amended) A composition of claim 68, wherein said cytotoxin is selected from the group consisting of ricin, abrin, a modified diphtheria toxin, and a modified *Pseudomonas* exotoxin A.

70. (Currently amended) A composition of claim 69, in which said modified *Pseudomonas* exotoxin A is selected from the group consisting of PE38, PE40, PE38KDEL (KDEL = SEQ ID NO:9), and PE38REDL (RDEL = SEQ ID NO:10).

71. (Currently amended) A composition of claim 70, wherein said modified *Pseudomonas* exotoxin A is PE38.

72. (Previously presented) A composition of claim 68, wherein said antibody is selected from the group consisting of a single-chain Fv (scFv), a single-chain Fab (scFab), and a disulfide stabilized Fv (dsFv).

73. (Previously presented) A composition of claim 72, wherein said antibody is a recombinantly expressed single-chain Fv.

74. (Currently amended) A composition of claim 73, wherein said antibody is 3B3(Fv) Fv (~~SEQ ID NO:1~~ which 3B3 Fv consists of a VH chain and a VL chain as encoded by SEQ ID NO.:2).

75. (Previously presented) A composition of claim 72, wherein said antibody is a dsFv.

76. Canceled.

77. (Previously presented) A composition of claim 72, wherein said immunotoxin is a fusion protein.

78. Canceled.

Appl. No. 09/673,707
Amdt. dated January 24, 2007
Reply to Notice of Non-Compliant Amendment

79. (Withdrawn- currently amended) A method of killing or inhibiting the growth of a cell displaying a gp120 protein or fragment thereof, said method comprising contacting said cell with an immunotoxin comprising a cytotoxin attached to an anti-gp120 antibody having the binding specificity of 3B3 Fv (~~SEQ ID NO:1~~ which 3B3 Fv consists of a VH chain and a VL chain as encoded by SEQ ID NO.:2).

80. (Withdrawn- currently amended) A method of claim 79, wherein said cytotoxin is selected from the group consisting of ricin, abrin, a modified diphtheria toxin, and a modified *Pseudomonas* exotoxin A.

81. (Withdrawn- currently amended) A method of claim 80, wherein said modified *Pseudomonas* exotoxin A is selected from the group consisting of PE38, PE40, PE38KDEL (KDEL = SEQ ID NO:9), and PE38REDL (RDEL = SEQ ID NO:10).

82. (Withdrawn- currently amended) A method of claim 81, wherein said modified *Pseudomonas* exotoxin A is PE38.

83. (Withdrawn) A method of claim 79, wherein said antibody is selected from the group consisting of a single-chain Fv (scFv), a single-chain Fab (scFab), and a disulfide stabilized Fv (dsFv).

84. (Withdrawn) A method of claim 83, wherein said antibody is a recombinantly expressed single-chain Fv.

85. (Withdrawn) A method of claim 83, wherein said antibody is 3B3(Fv).

86. (Withdrawn) A method of claim 83, wherein said antibody is a dsFv.

87. (Withdrawn) A method of claim 83, wherein said antibody is 3B3(dsFv).

88. (Withdrawn) A method of claim 83, wherein said immunotoxin is a fusion protein.

Appl. No. 09/673,707
Amdt. dated January 24, 2007
Reply to Notice of Non-Compliant Amendment

89. Canceled

90. (Withdrawn- currently amended) A method of killing or inhibiting the growth of cells bearing gp120 protein or fragment thereof, said method comprising administering to an organism containing said cells a composition comprising:

a pharmaceutically acceptable carrier or excipient; and

an immunotoxin comprising a cytotoxin attached to an anti-gp120 antibody having the binding specificity of 3B3 Fv (~~SEQ ID NO:1~~ which 3B3 Fv consists of a VH chain and a VL chain as encoded by SEQ ID NO.:2) and minimum affinity of 3B3 Fv (~~SEQ ID NO:1~~ which 3B3 Fv consists of a VH chain and a VL chain as encoded by SEQ ID NO.:2).

91. (Withdrawn- currently amended) A method of claim 90, wherein said cytotoxin is selected from the group consisting of ricin, abrin, a modified diphtheria toxin, and a modified *Pseudomonas* exotoxin A.

92. (Withdrawn- currently amended) A method of claim 91, wherein said modified *Pseudomonas* exotoxin A is selected from the group consisting of PE38, PE40, PE38KDEL (KDEL = SEQ ID NO:9), and PE38REDL (RDEL = SEQ ID NO:10).

93. (Withdrawn- currently amended) A method of claim 91, wherein said modified *Pseudomonas* exotoxin A is PE38.

94. (Withdrawn) A method of claim 90, wherein said antibody is selected from the group consisting of a single-chain Fv (scFv), a single-chain Fab (scFab), and a disulfide stabilized Fv (dsFv).

95. (Withdrawn) A method of claim 94, wherein said antibody is a recombinantly expressed single-chain Fv.

96. (Withdrawn) A method of claim 94, wherein said antibody is 3B3(Fv).

97. (Withdrawn) A method of claim 94, wherein said antibody is a dsFv.

Appl. No. 09/673,707
Amdt. dated January 24, 2007
Reply to Notice of Non-Compliant Amendment

98. Canceled.

99. (Withdrawn) A method of claim 90, wherein said immunotoxin is a fusion protein.

100. Canceled.

101. (Withdrawn) A method of claim 90, further comprising administering to said organism a protease inhibitor.

102. (Withdrawn) A method of claim 90, further comprising administering to said organism a reverse transcriptase inhibitor.

103. (Withdrawn) A method of claim 90, further comprising administering to said organism both a protease inhibitor and a reverse transcriptase inhibitor and then withdrawing the reverse transcriptase inhibitor while maintaining protease inhibitor dosing during administration of said composition.